

## **【CLAIMS】**

### **【Claim 1】**

A dishwasher comprising:

a control panel for a user to input commands with;

a controller for controlling the dishwasher to perform each cycle according to the commands inputted into the control panel, and ensuring that a wash cycle is always completed by an upper arm; and

a load driver for controlling an operation of a wash pump and a discharge member according to a control signal from the controller.

### **【Claim 2】**

The dishwasher according to claim 1, wherein the controller measures a running time of the wash pump and alternately operates a plurality of discharge members at a preset temporal interval.

### **【Claim 3】**

The dishwasher according to claim 1, further comprising a water level sensor for sensing a water level of wash liquid entering the dishwasher, and sending a signal from the water level sensor to the controller when the water level of the wash liquid reaches a predetermined level.

**【Claim 4】**

The dishwasher according to claim 3, wherein after the sending of the signal from the water level sensor to the controller, the wash pump operates.

**【Claim 5】**

A controlling method for a dishwasher, comprising:

selecting a wash cycle by a user and inputting operation commands;

beginning a cycle according to the selection of the wash cycle and operating a wash pump and a discharge member; and

controlling the dishwasher during the cycle to ensure that the cycle ends with an operation of an upper arm.

**【Claim 6】**

The controlling method of claim 5, wherein the operation of the discharge member switches between an upper arm and a lower arm.

**【Claim 7】**

The controlling method of claim 5, wherein the operation of the discharge member has a running time dependant on the operation of the wash pump.

**【Claim 8】**

The controlling method according to claim 5, wherein the controlling of the dishwasher during a cycle to ensure that a wash cycle ends with the operation of an upper arm includes switching the discharge member by the controller when

the running time of the wash pump reaches a first setting time.

**【Claim 9】**

The controlling method according to claim 8, further comprising operating a switched discharge member from a time of switching the discharge member until the running time of the wash pump reaches a second setting time.

**【Claim 10】**

The controlling method according to claim 9, further comprising determining by the controller whether the switched discharge member is the upper arm when the running time of the wash pump reaches the second setting time.

**【Claim 11】**

The controlling method according to claim 10, wherein if the switched discharge member is determined to be the upper arm, remaining stages of the wash cycle and other operations are performed.

**【Claim 12】**

The controlling method according to claim 10, wherein if the switched discharge member is determined not to be the upper arm, the upper arm is designated as the operating discharge member and remaining stages of the wash cycle and other operations are performed.

**【Claim 13】**

A controlling method of a dishwasher comprising designating a final operating

discharge member of a wash cycle as always an upper arm in an operation in which the discharge member switches between the upper arm and a lower arm.

**【Claim 14】**

The controlling method according to claim 13, wherein the operation of the discharge member switching between the upper arm and the lower arm has a switching interval depending on an operation of a wash pump.

**【Claim 15】**

The controlling method according to claim 14, wherein during the operation of the wash pump, the upper arm or the lower arm operates and a controller measures a running time of the wash pump.

**【Claim 16】**

The controlling method according to claim 13, wherein if the upper arm is not the final operating discharge member of the wash cycle, a controller switches the upper arm to be the final operating discharge member.

**【Claim 17】**

The controlling method according to claim 13, wherein the switching of the discharge member between the upper arm and the lower arm occurs at least once, whereupon the running time of the wash pump is measured.

**【Claim 18】**

The controlling method according to claim 17, wherein if the running time of the wash pump reaches a preset time stored in the controller, the operating nozzle is switched.